

FIG. 2

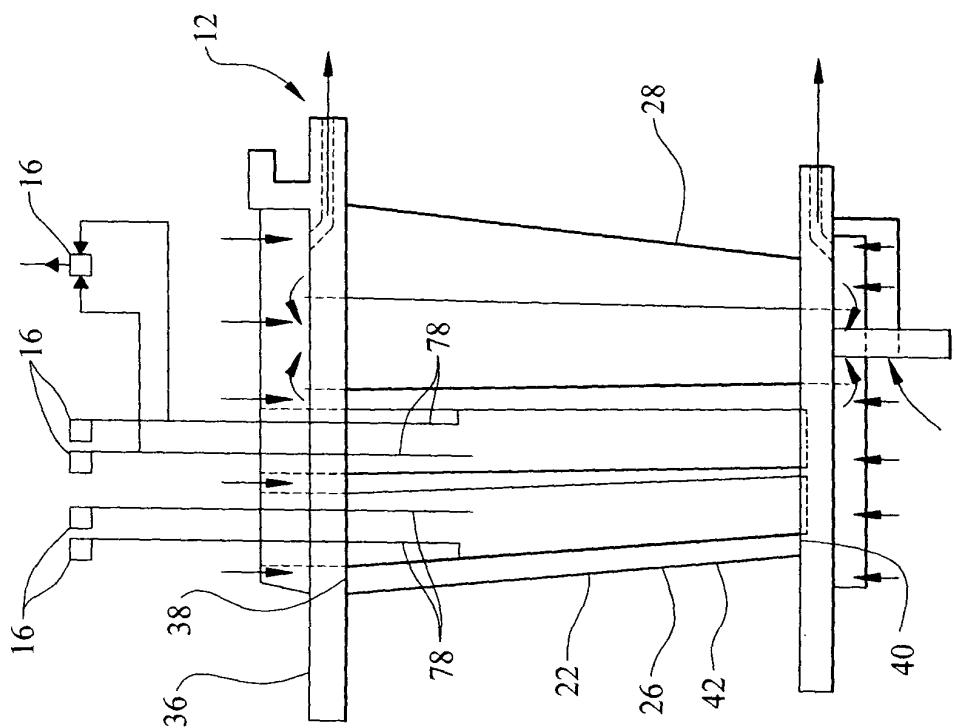
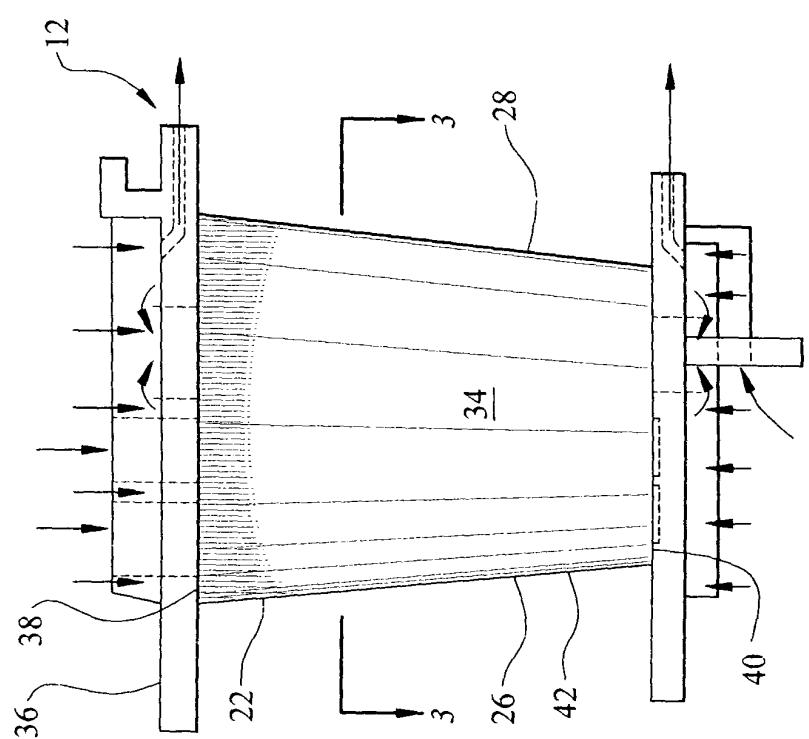
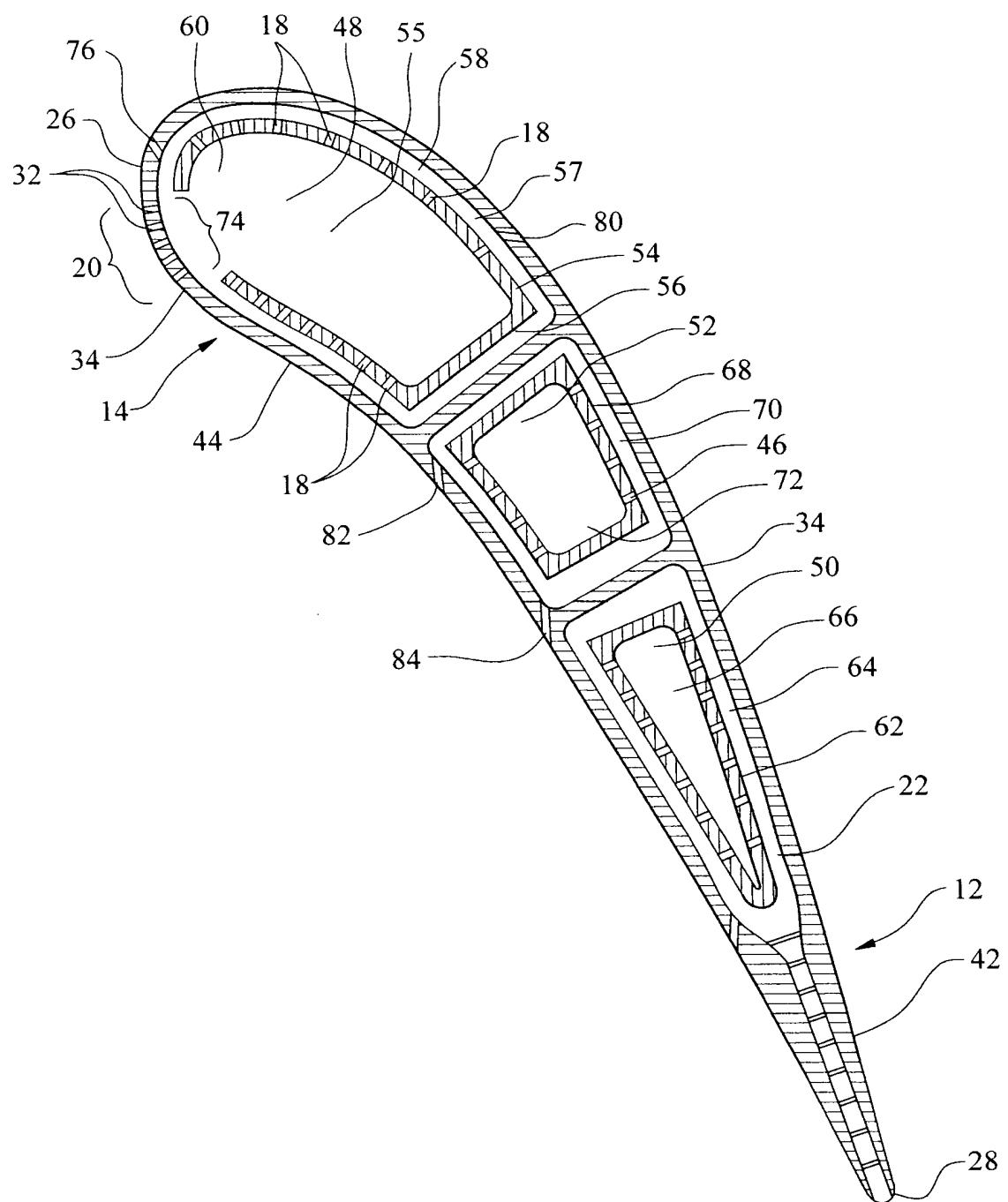


FIG. 1

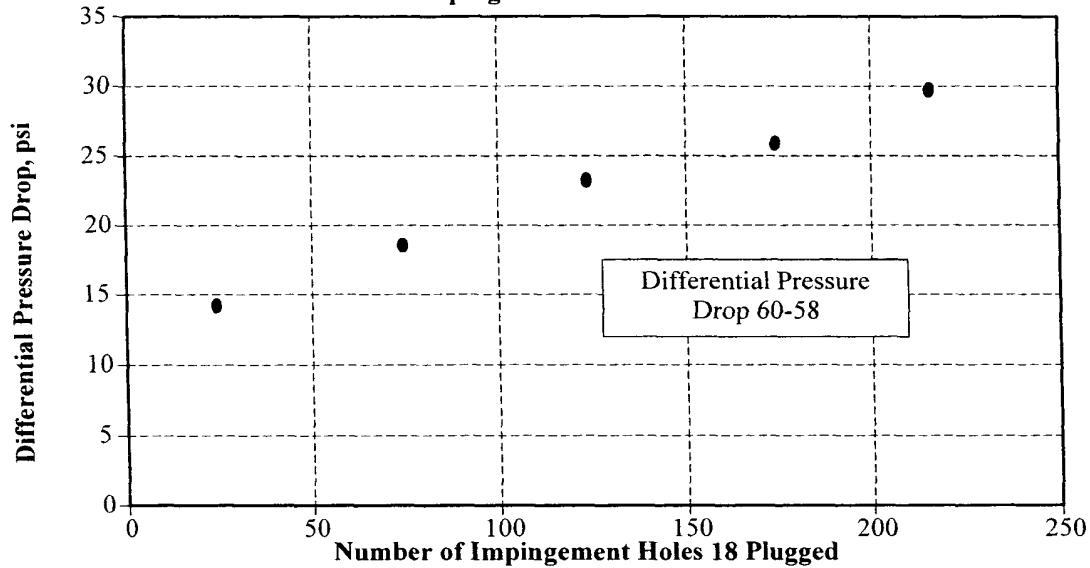




*FIG. 3*

**Measured Differential Pressure Drop  $\Delta P_{58, 60}$**   
**Plugging Occurs at the Impingement Insert**

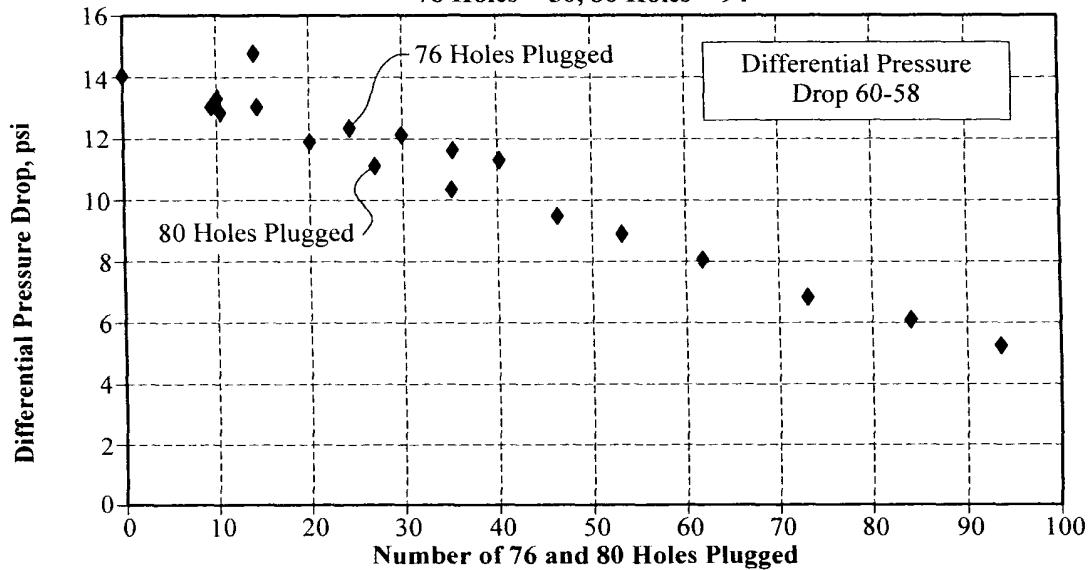
**Plugged at Forward Insert  
 Impingement Holes 18 = 223**



**FIG. 4**

**Measured Differential Pressure Drop  $\Delta P_{58, 60}$**   
**Plugging Occurs at the Suction Side Film Holes**

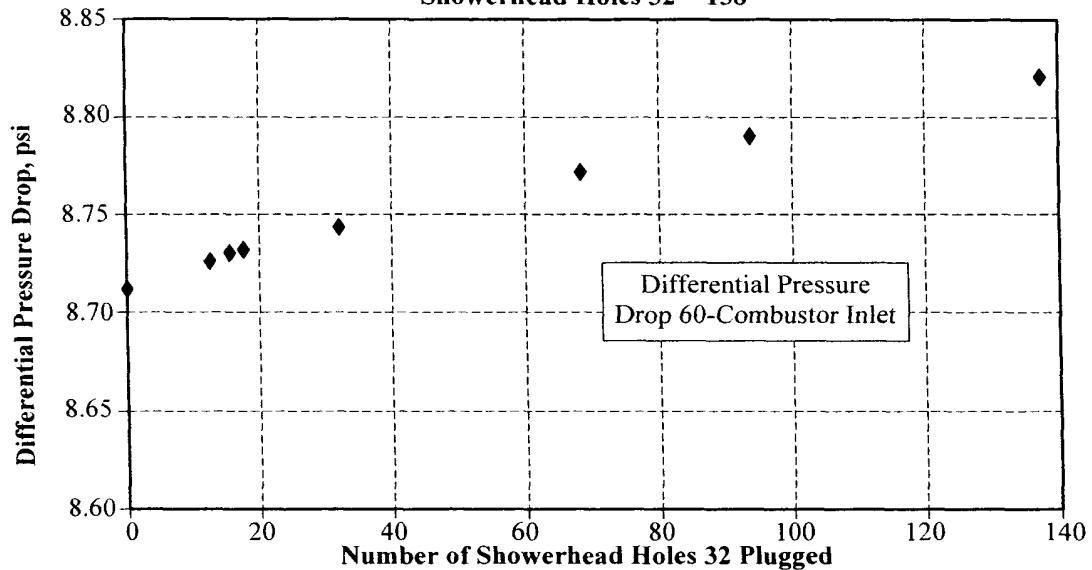
**Forward Cooling Circuit  
 76 Holes = 50, 80 Holes = 94**



**FIG. 5**

**Measured Differential Pressure Drop  $\Delta P_{60\text{-Combustor Inlet}}$**   
**Plugging at the Shower Head**

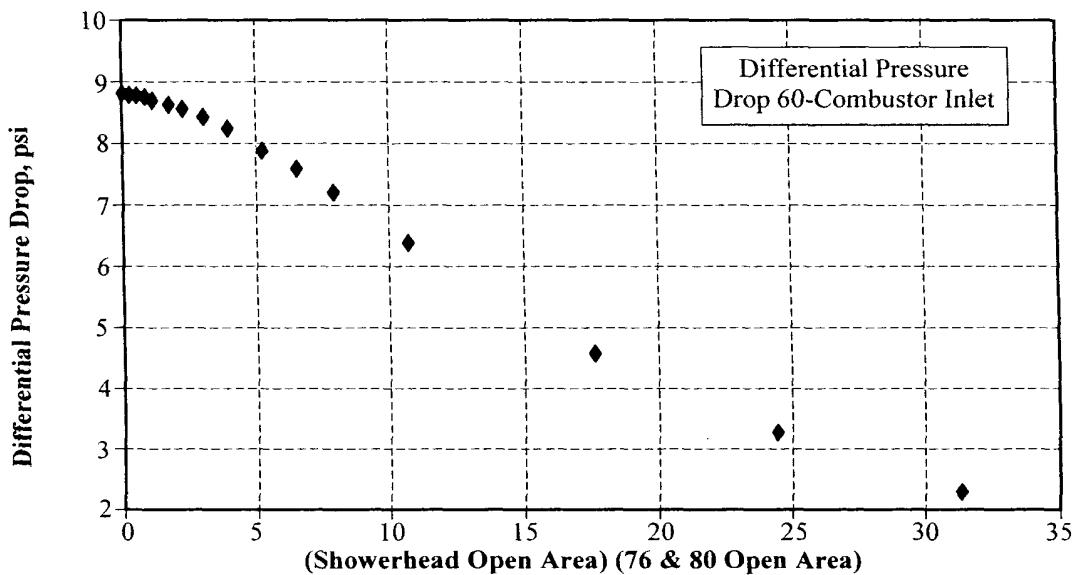
**Forward Cooling Circuit**  
**Showerhead Holes 32 = 138**



**FIG. 6**

**Measured Differential Pressure Drop  $\Delta P_{60\text{-Combustor Inlet}}$**   
**Burn-off Shower Head**

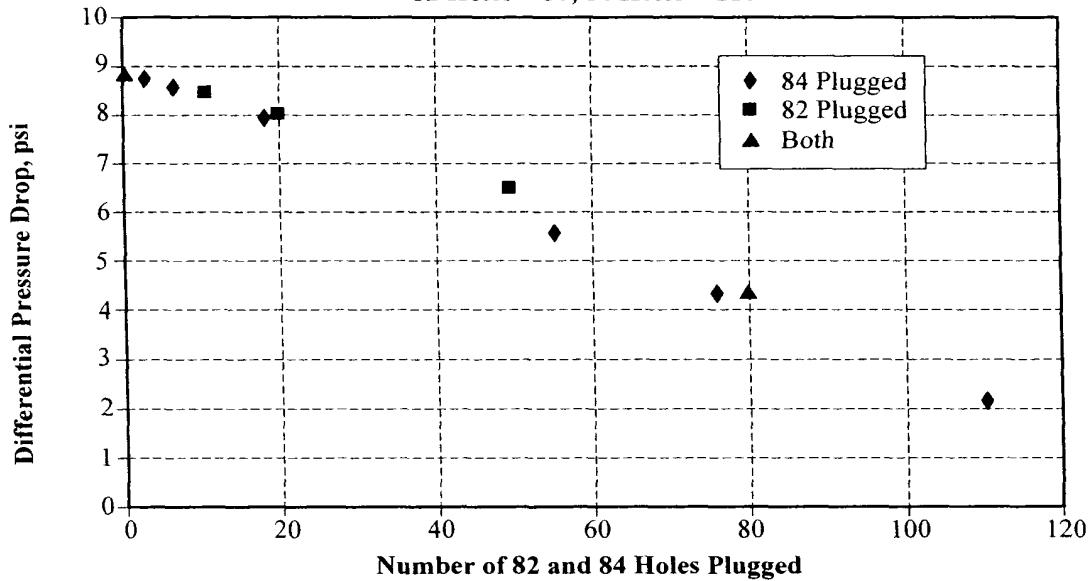
**Forward Cooling Circuit (48)**



**FIG. 7**

**Measured Differential Pressure Drop  $\Delta P_{72, 70}$**   
**Plugging Occurs at the Pressure Side Film Holes**

Mid-Cooling Circuit, 72, 70 Pressure Drop  
82 Holes = 50, 84 Holes = 110



*FIG. 8*